



2123

PATENT
Attorney Docket No. 204559

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

LeRoy G. Hagenbuch

Application No. 09/593,647

Filed: June 13, 2000

Group Art Unit: 2123

Examiner: Eduardo Garcia-Ostero

For: **PROCESS FOR THREE-DIMENSIONAL
MODELING AND DESIGN OF OFF-
HIGHWAY DUMP BODIES**

CERTIFICATE OF MAILING

I hereby certify that this SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (along with any documents referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date 2/8/05 Signature Susan M. [illegible]

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.

The Information Disclosure Statement is being filed:

- ☐ **within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.
- ☒ **after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:
- ☐ the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).
- or*
- ☒ the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).

NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

Copies of the References

- ☐ Copies of all of the references listed on the enclosed Form 1449 are enclosed herewith.
- ☐ Copies of U.S. patents and patent applications that are listed on the accompanying Form 1449 are not enclosed herewith. Copies of other references identified on the accompanying Form 1449 are enclosed herewith.
- ☐ Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3). An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3).

- ☐ A copy of the foreign search report is enclosed herewith.
- ☒ The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		Status (<i>check one</i>)		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1. 09/333,379	June 15, 1999		X	
2.				
3.				

Statement under 37 CFR 1.97(e)

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

Statement under 37 CFR 1.704(d)

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

Fees

- ☐ No fee is owed by the applicant(s).
- ☐ The **IDS Fee of \$180** under 37 CFR 1.17(p) is enclosed herewith.

In re Appln. of : LeRoy G. Hagenbuch
Application No. 09/593,647

Method of Payment of Fees


- ☐ Attached is a check in the amount of \$.
☒ Charge Deposit Account No. 12-1216 in the amount of \$180.00. (A duplicate copy of this communication is enclosed for that purpose.)

Authorization to Charge Additional Fees

- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

Instructions as to Overpayment

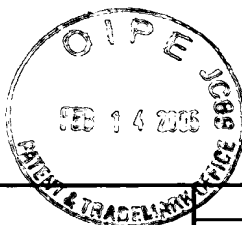
- ☒ Credit Account No. 12-1216.
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Date: February 8, 2005

AZPlease type a plus sign (+) inside this box



Substitute for form 1449A/B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	09/593,647
Filing Date	June 13, 2000
First Named Inventor	HAGENBUCH, LeRoy G.
Group Art Unit	2123
Examiner Name	Eduardo Garcia-Ostero
Attorney Docket Number	204559

Sheet

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of

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Attorney Docket Number

204559

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

OTHER - NON PATENT LITERATURE DOCUMENTS

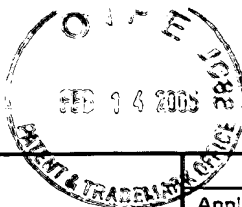
Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No**
	A Y	DUFF, Elliot, <u>"Automated Volume Measurement of Haul-Truck Loads"</u> , CSIRO Manufacturing Science and Technology, Presented at Open Coal Cut Operations Conference, Mackay, Queensland, June 16, 2000		
	A Z	HAGENBUCH, LeRoy G., <u>SME Preprint 02-137</u> entitled "Off-Highway Truck Body True Capacity. . . Why Can't I Get Rated Payload on My Off-Highway Truck Without Hungry Boards and Tail Extensions".		

Examiner Signature

Date Considered

- * A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).
- + An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).

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OTHER - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No**
	BA	"Capacity Rating—Dumper Body and Trailer Body—SAE J1363 Nov 95," 1999 SAE Handbook-Volume 3 On-Highway Vehicles and Off-Highway Machinery, Society of Automotive Engineers, Inc.		
	BB	"Earth-Moving Machinery-Dumper Bodies-Volumetric Rating," International Standard ISO 6483; 1980, p. 1-5.		
	BC	"Komatsu Price Changes," Equipment Watch Price Alert, August 2002.		
	BD	Komatsu 930E-2 truck spec sheet, June 2002.		
	BE	"Caterpillar Price Changes," Equipment Watch Price Alert, January 2003		
	BF	Caterpillar 777D Off-Highway Truck, spec sheet, June 2000.		
	BG	"Mining Lifts Goldfields Crane Hire," Australia Mining Monthly, December 2002, p. 67		
	BH	"Detroit Diesel-We'll Move Mountains for You," Australia Mining Monthly, August 2003		
	BI	"Trucks & Shovels," World Mining Equipment; September 2003, Vol. 27, No. 7 (including Komatsu PC 3000 ad and truck/shovel loading photos)		
	BJ	North American Quarry News, 2003-DBT Mineral Processing ad		
	BK	Mining Engineer, front cover; May 2003		
	BL	"P&H 2800 XP Shovel," Perspective in Mining, Vol. 7, No. 2, p. 4		
	BM	"Excavator Selection," Peak & Performance Practices, front cover		
	BN	"Angles of Repose (Heap)"; Chart, Philippi-Hagenbuch, Inc. 2003		
	BO	Oner, Mete, "Deep Dark Secrets of Geotechnical Engineering," EJGE/Magazine, internet article 1997; p. 1-4		
	BP	"B.2.60 Angle of Repose," web page from Michigan State University Department of Physics and Astronomy Lecture Demonstrations Databases, downloaded September 28, 2003.		
	BQ	"Angle of Repose," web page from Michigan Tech University, downloaded September 28, 2003.		
	BR	"Angle of Repose," web page from NCSU Physics DemoRoom, downloaded September 28, 2003.		
	BS	"Angle of Repose and Angle of Marginal Stability," web page from http://www.hhrs.de/people/mueller/papers/parallelMD99/node3.html , downloaded September 28, 2003.		
	BT	"Angle of Repose," web page from www.HyperDictionary.com , downloaded September 28, 2003.		
	BU	"Angle of Repose," web page from University of Texas at Austin Physics Department, downloaded September 28, 2003.		
	BV	Faris, Roger, "Find Your Safe Angle of Repose," internet article from The Seattle Press, downloaded September 28, 2003.		
	BW	"Mass Wasting and the Angle of Repose," internet article from http://phoenix.liuent.edu/~divernere/notes/angle_of_repose.htm ; p. 1-3, downloaded September 28, 2003.		
	BX	Angle of Repose diagram from Brunner Mond, undated		
	BY	"Angle of Repose," charts from web page http://www.geol.umd.edu/~kaufman/ppp/chapter8/sld006.htm ; p. 1-2, downloaded October 4, 2003.		
	BZ	Lee, J. et al., "Angle of Repose and Angle of Marginal Stability: Molecular Dynamics of Granular Particles," abstract article from www.IOP.org/EJ/abstract/0305-4470/26/2/01 ; p. 1-2, January 21, 1993.		
	CA	"Angle of Repose," web page from www.RCRC.nm.org/glossary/gl-angle-of-repose.html , downloaded September 28, 2003.		

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CB	Olson, C.J. et al., "Effect of Grain Geometry on Angle of Repose and Dynamics," internet article from www.eps.org/aps/meet/MAR01/baps/abs/S338005.html , downloaded September 28, 2003.		
CC	"Effect of Water on the Angle of Repose," slide 2 of 35 from internet site www.ideo.columbia.edu/dees/ees/ies2/masswasting/sld002.html , downloaded September 28, 2003.		
CD	"Dynamics Angles of Repose," internet article from http://groups.physics.umn.edu/sand/theory.shtml ; p. 1-2, downloaded September 28, 2003.		
CE	Morisawa, Marie, "Stable Angles of Slopes," from www.beloit.edu/~SEPM/Earth_Works/Stable_angles_of_slopes.html ; p. 1-4, downloaded September 28, 2003.		
CF	Park, Brien, "What do you suppose is the "angle of repose"?", web article from www.nps.gov/brca/Geodetect/Earth%20Systems/angle%20of%20repose.htm ; p. 1-4, July 9, 2002.		
CG	"Sand Angels," web article from www.edgerton.org/kidscorner/sandangels.html ; p. 1-2, downloaded September 28, 2003.		
CH	Excerpt from "Highways in the River Environment," p. 1-4; 1975.		
CI	"Sand Piles," web page from http://van.hep.uiuc.edu/van/qa/section/Everything_Else/Hard_to_Categorize/924816567.htm , downloaded September 28, 2003.		
CJ	"Slope Stability Lab," web page from www.geo.arizona.edu/K-12/azpepp/education/activity/la.html ; p. 1-4, downloaded September 28, 2003.		
CK	"The Angle of Repose and the Static Coefficient of Friction," web page from www.redcompservices.com/Pcourses/Phys1/repose.htm ; p. 1-2, downloaded September 28, 2003.		
CL	Promptalagorn, Wiroj et al., "Friction Coefficient & Angle of Repose Equipments," web abstract from http://library.kmitnb.ac.th/projects/eng/MHT/mht0096e.html , 1996		
CM	"Slope Stability Lab," p. 1-4 (undated)		
CN	"Angle of Repose," slide 3 of presentation, http://www3.uakron.edu/geography/lrb/physf97/lectures/masswaste/sld003.htm , downloaded September 28, 2003.		
CO	Chase, George G., "Solids Notes," University of Akron (undated), pp. 4-1 and 4-2.		
CP	"Mass Wasting," (undated); p. 1-7;		
CQ	"CHASM: Cone Handling Algorithms for Stockpile Modeling," web article from www.cmis.csiro.au/PPI/RecentProjects/CHASM.htm ; p. 1-3, downloaded September 28, 2003.		
CR	"Axial Segregation in Binary Granular Flows," abstract from www.aae.uiuc.edu/floatn/C%20PROJ/pp02-03f.htm ; p. 1-2, downloaded September 28, 2003.		
CS	Bulk-Store Structures Inc. internet brochure from www.bulk-store.ca/fert.html ; p. 1-3; 2000		
CT	Commercial Hopper Tank Storage Capacities and Heights spec sheet; 2002.		
CU	"Volcanism Behind the Main Arc," web page from www.rci.rutgers.edu/~carr/fieldtrip/fieldtext/cuilapa_fldtxt.htm , downloaded September 28, 2003.		
CV	"Screening Equipment," SMICO Manufacturing web page www.smico.com , downloaded October 1, 2003.		
CW	"Material Bulk Density Reference Chart," SMICO Manufacturing; p. 1-20 (undated)		
CX	Hudson, Ralph G., <i>The Engineers' Manual</i> ; Second Edition 1963; p. 101-102.		
CY	"Storage of Farm Crops," <i>Agricultural Engineers' Handbook</i> ; p. 691, 1961		
CZ	"Approximate Angle of Repose of Various Materials," <i>Caterpillar Performance Handbook</i> ; January 1972, p. 25.		
DA	"Tables-Angle of Repose of Various Materials," <i>Caterpillar Performance Handbook</i> , October 2002, p. 26-1.		

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Sheet 4 of 5

DB	"Material Angles of Repose," chart from Philippi-Hagenbuch, Inc., 2003		
DC	Photographs from Caterpillar brochures featuring: 785 Truck (4-88) -AEHQ7006 (undated).		
DD	Photographs from Caterpillar brochures featuring 785C Mining Truck (4-02)-AEHQ5328-02 (undated)		
DE	Photographs from Caterpillar brochures featuring 785/789 Truck (AEDK1468) (undated)		
DF	Photographs from Caterpillar brochures featuring 775B Truck (4-94)-AEHQ3874 (undated)		
DG	Photographs from Caterpillar brochures featuring 773E Truck (11-01)-AEHQ5456 (undated)		
DH	Photographs from Caterpillar brochures featuring 775E Truck (11-01)-AEHQ5457 (undated)		
DI	"Density of Common Materials," <i>The Excavators 5th Edition-Hitachi</i> , sections 11-36:11-39 (undated).		
DJ	"Tables: Weight of Materials," <i>Caterpillar Performance Handbook Edition 33</i> , October 2002.		
DK	Caterpillar General Dimensions 769B Truck (undated).		
DL	Caterpillar Body Assembly 769B Truck (undated).		
DM	Sideview drawing showing "Ten Different Load Configurations-Load Heaps for the Caterpillar 769B Body, created by Philippi-Hagenbuch, 2003.		
DN	"Four "A" Size Isometric Drawings displaying one each possible 1.7:1 load configuration-load heap," for the Caterpillar 769B Truck; created by Philippi-Hagenbuch, 2003.		
DO	1.7:1 Heap (1:1 at rear) 30.2 cu yd.		
DP	1.7:1 (True Heap) 27.5 cu yd		
DQ	1.7:1 Profiled Heap (to a point) 26.0 cu yd		
DR	1.7:1 Profiled Heap (with top plateau) 25.8 cu yd		
DS	"3M Mining" advertisement in <i>Mining Monthly</i> , August 2003.		
DT	CSIRO-Common Wealth Scientific & Industrial Research Organization of Australia; website home page, downloaded October 5, 2003		
DU	"New Technology to Measure Mining Haul Truck Loads," CSIRO Press Release July 1, 2003.		
DV	"New Technology to Measure Mining Haul Truck Loads," article from http://www.cmit.cisro.au/innovation/2003.08 ; p. 1-2, downloaded August 22, 2003.		
DW	"A Proud History," <i>Euclid Haulers</i> brochure; p. 2; 1988.		
DX	"2:1 Heap," <i>Euclid-Hitachi</i> brochure; p. 4; 1995.		
DY	"2:1 SAE Heap," <i>Euclid-Hitachi</i> brochure; p. 4; 1999.		
DZ	"2:1 SAE—Euclid R130," <i>VME Americas Inc.</i> ; p. 4, 1989.		
EA	"2:1 SAE—Euclid R190," <i>VME Americas Inc.</i> ; p. 4; 1990.		
EB	"2:1 SAE—Euclid R25," <i>Euclid Inc.</i> ; 1982.		
EC	"2:1 Field Heap—Euclid R35," <i>Euclid Inc.</i> ; 1983.		
ED	"SAE 2:1 Rated Heap," <i>VME Industries North America</i> ; 1992		
EE	Caterpillar, "Mine Specific Design (MSD) Body Program". from CD distributed October, 2000 at Mine Expo 2000		
EF	Conymet, "Photometry Software Tool for Volumetric and Load Distribution Study", downloaded from www.conymet.com ; November 26, 2002		
EG	Conymet, "High Efficiency Body (HE Series)", from presentation given May 2002 at Haulage 2002 Conference.		
EH	Disca. "DT-HILOAD Haulage 2002", from presentation given May 2002 at Haulage 2002 Conference		
Examiner Signature		Date Considered	

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Sheet 5 of 5

E I	Angles of Repose Diagrams, updated (created after filing date of present application)
E J	Selected charts and diagrams from a Philippi-Hagenbuch, Inc. Presentation undated (created after filing date of present application)
E K	Caterpillar 769B Truck product brochure; August 1966.
E L	Caterpillar 769B Truck product brochure specification; undated (applicants believe available in the late 1960's to early 1970's)
E M	Caterpillar 769B Truck product brochure specification; undated (applicants believe available in the late 1960's to early 1970's)
E N	Caterpillar 769 B Truck product brochure; March 1974.
E O	HAGENBUCH, LeRoy G., "Adapting the Off-Highway Truck Body Volumetric Process to Real World Conditions", SAE TECHNICAL PAPER SERIES, 2000; undated (applicants believe available in the late 1960's to early 1970's).

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